

AGENDA ITEM #15

September 10, 2004

To: Delta Protection Commission

From: Margit Aramburu

Subject: Review of the *Land Use and Resource Management Plan for the Primary Zone of the Delta* (adopted in 1995; readopted and adopted as regulations in 2002)
(For Commission Consideration and Action)

STAFF RECOMMENDATION:

- **Consider and adopt schedule for review of current plan findings, policies and recommendations.**

MANDATE OF LEGISLATURE:

As part of the approval of the budget for FY 04-05, the Legislature added the following assignment to the Commission's budget authorization:

Resource Management Plan Update. The Delta Protection Commission shall report to the Legislature, on or before January 10, 2005, on the status of its review of the resource management plan, or "Delta Plan", including its efforts to identify changes and growth pressures within the Primary Zone, and lands within the Secondary Zone, the development of which impacts the resources of the Primary Zone.

The Commission's Plan consists of nine sections, each one includes a brief summary, findings, policies and recommendations. For each of the nine topics a background report was prepared, reviewed by a public advisory committee and the Commission. Each background report received review by member agencies, other agencies, and members of the public and interest groups.

The nine sections include:

- Environment
- Utilities and Infrastructure
- Land Use
- Agriculture
- Water
- Recreation and Access
- Levees
- Marine Patrol, Boater Education and Safety Programs

For each section, a slightly different approach is recommended:

- Environment: Commission to review current language at September meeting. Also waiting for release of a Delta Regional Environmental Restoration Implementation Plan; this Plan is being prepared by Department of Fish and Game and CALFED Bay Delta Program. The Plan will include more specific recommendations regarding ecosystem restoration in the Delta.
- Utilities and Infrastructure: Start review at the September meeting by reviewing the attached language and directing staff to set up a public meeting to discuss possible language changes. Next consideration: November 2004.
- Land Use: Commission has appointed Delta Land Use Impacts Committee; Committee reports to Commission at September meeting. Committee will review current findings, policies, and recommendations and make suggestions for possible updates. Next Commission consideration: November 2004 or January 2005.
- Agriculture: Commission has been working with American Farmland Trust to prepare a study of Delta agriculture; project currently on hold due to funding constraints but may be restarted in near future. Postpone schedule for review until January 2005.
- Water: Start review at the November 2004 meeting by reviewing the current language and directing staff to set up a public meeting to discuss possible language changes. Next consideration: January or March 2005.
- Recreation and Access: Contract in place to prepare Phase I (aquatic) of new regional recreation strategy. Will schedule Commission review of draft product in late Spring; product due June 30, 2005.
- Levees: Review started at the July 2004 meeting. Staff will set up a regional meeting possibly in October. Next consideration: November 2004.
- Marine Patrol, Boater Education and Safety Programs: Refer to Recreation Citizens Advisory Committee (RCAC) for review and comment. RCAC review in September or October. Next consideration: November 2004 or January 2005.

Note: Underlined text is possible changes suggested by staff.

ENVIRONMENT

The Delta is a unique geographic area in the State of California, a low-lying region of rich mineral and peat soils, composed of islands created largely by humans, as they diked and drained the prehistoric marshes of the region.

The lush wetland habitats surrounded by riparian woodlands have been replaced by agricultural lands, both cultivated and irrigated croplands, and irrigated and unirrigated pasture lands.

Remnants of natural habitat are located largely along some sloughs and rivers and on small channel islands. Pockets of wooded or wetland habitat exist on some islands.

The aquatic habitats were historically brackish and home to both resident and migratory fish.

Modern aquatic habitats are affected by flows released from upstream dams, seasonal drainage from agricultural lands, and year-round drainage from sources outside the Primary Zone, such as sewage treatment plants. Several large, freshwater lakes are located on the eastern edge of the Delta, providing year-round wetland habitat.

At all levels of the ecosystem, native plants and animals are now competing with exotics. Of particular concern are the Asian clam, which is competing for phytoplankton at the bottom of the food chain, and popular introduced game fish, such as the Striped bass, which are declining in numbers and in health. The native winter-run Chinook salmon and Delta smelt are designated endangered and threatened, respectively.

Large mammals, such as bear and elk, which historically lived in and around the Delta have been eliminated. Aquatic mammals including beaver and otter still remain. Both year-round and migratory birds have adapted to the agricultural practices in the Delta, particularly the small grain fields which are flooded in fall and winter months. Migratory birds include ducks, geese, swans, cranes, and shorebirds. Hawks and eagles forage in the Delta fields; Swainson's Hawk is designated "threatened" by the Department of Fish and Game.

The geology of the region created this unique "delta". Sediments trapped inland of the rocky neck of the Carquinez Straits resulted in the creation of the 1,100 square mile area known as "the Delta". The Delta exists in a State known for earthquake faults; the probability of seismic activity remains constant. A zone of buried thrust faults is located along the western edge of the Delta.

The peat soils of the central and western Delta have oxidized in great part due to drainage.

Losses of soil due primarily to such oxidation have resulted in subsidence of land surfaces of up to 20 feet. Original peat soil depths varied substantially from area to area and even within a given island. Current studies show the only effective way to stop subsidence is to reflood the peat soils. Subsidence has slowed to about one-third of an inch a year in many areas. About 60% of the lands in the Delta are designated prime agricultural lands.

The low elevations of the Delta, exacerbated by subsidence, result in a constant threat of flooding. Twice in each approximately 25 hour period the tides raise and lower the elevation of the Sacramento River about three feet. The threat of flooding is generally associated with periods of high winter rainfall and periods of rapid spring snow melt in the watersheds draining into the Delta. The most critical conditions occur when upstream dams are full and the resulting high rates of river flow combine with high tides

Goal: Preserve and protect the natural resources of the Delta, including soils. Promote protection of remnants of riparian habitat. Promote seasonal flooding and agriculture practices on

agricultural lands to maximize wildlife use of the hundreds of thousands of acres of lands in the Delta. Promote levee maintenance and rehabilitation to preserve the land areas and channel configurations in the Delta.

Environment Findings:

F-1. The physical environment which existed prior to 1850 has been permanently and irretrievably modified through levee construction, drainage of wetlands, and introduction of agriculture.

F-2. Human activities in the central Delta have contributed to subsidence of much of the area. Some areas are now more than 20 feet below sea level.

F-3. Most of the soils in the central Delta are designated "prime" and of statewide value for agriculture.

F-4. The peat soils have subsided largely through oxidation; other activities resulting in subsidence include cycles of drain and flood, wind, and burning.

F-5. While over 95% of all wetlands in the Delta have been lost, the Delta area is used by 10% of the wintering waterfowl traveling within the Pacific Flyway.

F-6. Valuable habitat for many birds and mammals is included on linear riparian corridors along levees and small isolated areas located on the islands and small channel islands, and Delta wetlands. Agricultural lands also provide high quality wildlife habitat and foraging areas, depending on agricultural practices. The levees keep flooding from occurring, which would destroy habitat. Levees are manmade structures which have no initial habitat value when constructed. The value of wildlife and habitat on the levees is dependent on the maintenance of the levees.

F-7. The value to wildlife of levee habitat and habitat within the levees is lessened by on-going human impacts such as levee maintenance, farm practices, human habitation, and recreational use of the levees and waterways. Activities such as water transport and boating use have eroded Delta channel islands, berms, and levees destroying habitat areas. Without levee maintenance, the habitat on the levees and within the islands will be lost.

F-8. The native population of fish and other aquatic species has been modified by hydromodification including water diversion, etc., through introduction of exotic species and other causes. Numbers of both native and of some introduced fish have dropped dramatically since the late 1960's; numbers have dropped so low that winter-run Chinook salmon and Delta smelt have been listed as endangered and threatened, respectively. However, the population of some introduced species of fish and other introduced aquatic species throughout the aquatic food chain has substantially increased.

F-9. There is no Delta regionwide management plan for wildlife resources. Under CALFED Bay Delta Program, Department of Fish and Game is preparing a regionwide wildlife habitat restoration plan.

F-10. Most of the Delta is located in the 100-year flood plain. While the levee system is constantly being maintained and upgraded, many Delta islands have been temporarily flooded; at least four have remained flooded. Permanent flooding, such as seen on Franks Tract, would adversely impact utility infrastructure, residential and recreational facilities, farmlands, wildlife habitat, transportation, commerce, quality of water for in-Delta and for export, and fisheries. Evaporation from flooded islands consumes substantially more water than is needed to farm those islands.

F-11. The Primary Zone, with its large open expanses of farmland, mosaic of small grain crop residues and shallow flooded fields, permitting wildlife to feed and rest, provides extremely high quality seasonal wildlife habitat.

F-12. Seasonal flooding in fall and winter has traditionally been carried out to serve several purposes: weed control, leaching of soils, control of oxidation of peat soils, provision of seasonal habitat, and hunting.

F-13. Delta channel islands and levees serve as habitat for several burrowing species, including beaver and muskrat. Some species have created burrows large enough to endanger levee stability.

Environment Policies:

P-1. The priority land use of areas of prime soil shall be agriculture. If commercial agriculture is no longer feasible due to subsidence or lack of adequate water supply or water quality, land uses which protect other beneficial uses of Delta resources, and which would not adversely affect agriculture on surrounding lands, or viability or cost of levee maintenance, may be permitted. If temporarily taken out of agriculture production due to lack of adequate water supply or water quality, the land shall remain reinstatable to agricultural production for the future.

P-2. Agricultural and land management practices shall minimize subsidence of peat soils. Local governments shall support studies of agricultural methods that minimize subsidence and shall assist in educating landowners and managers as to the value of utilizing these methods.

P-3. Lands managed primarily for wildlife habitat shall be managed to provide several inter-related habitats. Deltawide habitat needs should be addressed in development of any wildlife habitat plan. Appropriate programs, such as "Coordinated Resource Management and Planning" (Public Resources Code Section 9408(c)) and "Natural Community Conservation Planning" (Fish and Game Code Section 2800 et seq.) and the Delta Regional Ecosystem Restoration Implementation Plan should ensure full participation by local government and property owner representatives.

[NOTE: The issue of development of a PORTION of an agricultural island for habitat should be addressed; the issue of BUFFERS, especially between habitat and agriculture, should be addressed.]

Environment Recommendations:

R-1. Seasonal flooding should be carried out in a manner so as to minimize mosquito production. Deltawide guidelines outlining "best management practices" should be prepared and distributed to land managers.

R-2. Wildlife habitat on the islands should be of adequate size and configuration to provide significant wildlife habitat for birds, small mammals, and other Delta wildlife.

R-3. Undeveloped channel islands provide unique opportunities for permanent wildlife habitat in the Primary Zone. A strategy should be developed to encourage permanent protection and management of the channel islands. Protection may include: acquisition, conservation easements, or memoranda of understanding. Management may include: protection from erosion, controlling human access, or habitat management, such as planting native plants and removing

exotic plants. Some larger, reclaimed channel islands may be suitable for mixed uses, such as recreation and habitat. Any development on channel islands must ensure long-term protection of the wildlife habitat.

R-4. Feasible steps to protect and enhance aquatic habitat should be implemented as may be determined by resource agencies consistent with balancing other beneficial uses of Delta resources.

[NOTE: The issue of fish screens on ag intakes should be addressed]

R-5. Publicly-owned land should incorporate, to the maximum extent feasible, suitable and appropriate wildlife protection, restoration and enhancement as part of a Deltawide plan for habitat management.

R-6. Management of suitable agricultural lands to maximize habitat values for migratory birds and other wildlife should be encouraged. Appropriate incentives, such as conservation easements, should be provided by nonprofits or other entities to protect this seasonal habitat through donation or through purchase.

R-7. Lands currently managed for wildlife habitat, such as private duck clubs or publicly-owned wildlife areas, should be preserved and protected, particularly from destruction from inundation.

UTILITIES AND INFRASTRUCTURE

Due to the Delta's location between major population areas, its unique resources, especially water and natural gas, and its flat terrain and general lack of development, the Delta has high value as a utility and transportation corridor.

Utilities located in the Delta include: radio and television transmission towers; electrical transmission lines including Pacific Gas and Electric, and Western Area Power Administration lines; natural gas pipelines, serving local gas fields and regional pipelines; petroleum transportation pipelines; and water transportation canals and pipelines transporting water from the Delta to regional users and transporting water through the Delta to the Bay Area. Buried pipelines within rights of way appear to generally have lesser impacts on wildlife movements or land uses than aboveground facilities. The aboveground facilities, such as pipelines, canals, and transmission lines do impact wildlife movements, reduce availability of valuable habitat, and result in direct loss of birds killed by striking transmission lines.

Local governments regulate the utilities that serve Delta residents and visitors including potable water, sewage disposal, and solid waste disposal. Most potable water is obtained from groundwater through local wells. Most wastewater from homes and businesses is treated in on-site septic tanks. Some of the larger communities and developments have self-contained wastewater treatment facilities. Communities outside the Primary Zone do and propose to continue to release treated wastewater into Delta waterways, onto constructed wetlands, or onto agricultural lands.

Natural gas remains an important natural resource extracted from the Delta. PG&E maintains a large underground storage site under McDonald Island.

Transportation systems traversing around and through the Delta include several railroads and freeways, state highways, and county roads. Many bridges connect island developments; five islands are served only by ferry.

Two major ports lie north and east of the Primary Zone, the Ports of Sacramento and Stockton, respectively. The shipping channels were constructed the late 1920's (Stockton) and 1950's (Sacramento). Several million tons of diversified products are shipped through the Delta each year.

Airports in the Delta are limited to small facilities serving individual land-owners and agriculture-serving businesses.

Goal: Protect the Delta from excessive construction of utilities and infrastructure facilities, including those that support uses and development outside the Delta. Where construction of new utility and infrastructure facilities is appropriate, ensure the impacts of such new construction on the integrity of levees, wildlife, and agriculture are minimized.

Utilities and Infrastructure Findings:

F-1. The flat, largely unpopulated Delta is a valuable site for regional utility corridors, such as transmission lines and pipelines.

F-2. High voltage transmission lines have disrupted wildlife use patterns and resulted in the loss of birds due to collision with those lines.

F-3. Isolated residential structures are served by independent potable water and sewage disposal systems.

F-4. Delta communities are served by small community water systems and small community sewage disposal systems.

F-5. Large communities on the edge of the Delta have located sewage treatment ponds at the edge of the Delta and release treated wastewater into Delta sloughs and rivers, and onto nearby agricultural lands.

F-6. Most solid waste generated in the Delta is disposed of at facilities outside the area.

Recycling is not readily available for Delta residents; in the Delta, agricultural waste is disposed of on site.

F-7. Productive natural gas fields are located in the Delta. A large underground gas storage facility is located at McDonald Island.

F-8. Surface transportation in the Delta serves the agricultural operations, transporting products out of the Delta to markets, and allows import of supplies and equipment. Other users of the Delta transportation network include regional trucking, regional commuters, recreational visitors, and local traffic within the Delta. Many existing Delta roads are historic, narrow, and nonconforming to present design standards. Drivers need to be aware of hazards and unique challenges that these roads pose.

F-9. While some railroad rights-of-way within the Delta have been sold, many traveling through the Delta remain intact. Regional rail traffic, between the Bay Area and the Central Valley passes through the Delta. Spur lines create shorter links between processing facilities and the Ports. Rail traffic, both freight and passenger, is increasing as intermodal transportation planning develops. Several new or refurbished stations are planned in the Delta region

F-10. Bridges and ferries are key links for surface transportation in the Delta. Bridges impact vessel traffic on the waterways; some bridges rarely open requiring boats to travel alternate waterways. Some bridges open regularly, impacting surface traffic and creating possible delays in emergency response. The few remaining ferries are expensive to maintain and operate, and may be affected by cuts in State and local government budgets.

F-11. Commercial shipping is an historic use of the Delta waterways. The two commercial shipping channels: Sacramento Deep Water Channel and Stockton Deep Water Ship Channel, provide important transportation for movement of agricultural products from the Delta and other areas to faraway markets.

F-12. Air transportation in the Delta is limited to small airstrips serving private property owners, small agriculture related businesses, and other limited use.

Utilities and Infrastructure Policies:

P-1. Impacts associated with construction of transmission lines and utilities can be mitigated by locating new construction in existing utility or transportation corridors, or along property lines, and by minimizing construction impacts. Before new transmission lines are constructed, the utility should determine if an existing line has available capacity. To minimize impacts on agricultural practices, utility lines shall follow edges of fields. Pipelines in utility corridors or existing rights-of-way shall be buried to avoid adverse impacts to terrestrial wildlife. Pipelines crossing agricultural areas shall be buried deep enough to avoid conflicts with normal agricultural or construction activities. Utilities shall be designed and constructed to minimize any detrimental effect on levee integrity or maintenance.

[NOTE: Should address pipelines in peat soils and historic problem of pipeline "float" and/or subsidence of surface area over the pipeline alignments.

P-2. New houses built in the Delta agricultural areas shall continue to be served by independent potable water and wastewater treatment facilities. Uses which attract a substantial number of people to one area, including any expansions to the Delta communities, recreational facilities or businesses, shall provide adequate infrastructure improvements or pay to expand existing facilities, and not overburden the existing limited community resources. New or expanded construction of wastewater disposal systems shall ensure highest feasible standards are met, as determined by the local governing body. Independent treatment facilities shall be monitored to ensure no cumulative adverse impact to groundwater supplies.

P-3. New sewage treatment facilities (including storage ponds) and new areas for disposal of sewage effluent and sewage sludge shall not be located within the Delta Primary Zone. The Rio Vista project, as described in the adopted Final Environmental Impact Report for such project, and the Ironhouse Sanitary District use of Jersey Island for disposal of treated wastewater and biosolids are exempt from this policy.

P-4. High groundwater tables and subsiding soil make the Delta an inappropriate location for solid waste disposal. Generation of waste shall be minimized through recycling programs for metals, glass, paper, cardboard, and organic materials. Recycling depots for these materials shall be located in central locations to serve Delta residents, visitors, and businesses.

P-5. Surface transportation in the Delta can be dangerous and congested. Roads within the Delta shall be maintained to serve the existing agricultural uses and supporting commercial uses, recreational users, and Delta residents. Where possible, commuter traffic and through traffic should be directed to surrounding highways and freeways, or minimized through programs which promote carpools, buses or trains.

[Need to address unintentional linkages or loops that would result in more commuter traffic through the Delta agricultural areas.]

P-6. Air transportation in the Delta shall be allowed to continue to serve Delta residents and agriculture-related businesses. Due to subsidence, transmission lines, high winds, fog, and high raptor and waterfowl use, the Primary Zone is not an appropriate location for new or expanded general aviation airports.

P-7. Operation of draw and swing bridges shall balance needs of land and water traffic. Commercial vessels and emergency road traffic shall have right-of-way over other traffic.

Utilities and Infrastructure Recommendations:

R-1. Railroad rights-of-way in and around the Delta should be protected as transportation corridors. Regional rail links between the Central Valley and the Bay Area should be developed for commuters as alternative transportation routes, thus removing traffic from Delta roadways.

[NOTE: Need to address appropriate uses for abandoned railroad rights of way].

R-2. Bridges provide critical links within the Delta. While bridges must be maintained to provide safe access across waterways, bridges should not be constructed so as to invite roadway expansion. Ferries should be maintained by public entities as long as they are economically viable. Public-private partnerships should be explored to offset costs of maintenance and operation. Hours of service may be curtailed and/or fees charged to non-residents.

R-3. The existing commercial shipping channels should be maintained, and if determined to be environmentally and economically appropriate, deepened to meet modern shipping needs. Expanded use of shallow draft vessels, such as barges, should be explored as a transportation alternative to highways. Material excavated from the shipping channels should, if feasible, be used for maintenance of Delta levees or for wildlife habitat enhancement within the Delta and for other uses within the Delta.

R-4. Materials dredged from Delta channels should, if feasible, be stored at upland sites for reuse for levee maintenance and repair, and other feasible uses in the Delta. Impacts to wildlife caused by storage of dredged materials should be mitigated.

R-5. CalTrans should designate, through appropriate signage, those roadways which are used to transport agricultural equipment and other slow-moving vehicles.

[NOTE: Need to address signage for scenic highways and roadways]

R-6. Potable water supplies to serve Delta uses can be obtained from surface waters or groundwater. Development of groundwater wells should be monitored to ensure wells do not result in overdraft and possible intrusion of saline water into groundwater supplies.

R-7. Natural gas production will continue to be an important use of Delta resources. Structures needed for gas extraction should be consolidated to minimize displacement of agriculture and wildlife habitat. In compliance with existing laws, facilities no longer needed for gas extraction should be completely removed to allow restoration of agriculture or wildlife habitat uses. Counties should ensure that there are appropriate buffers between gas processing and storage facilities and residential and recreational uses to protect lives and property.

R-8. Utilities should be required to contribute a fair share to the cost of levee maintenance and other local services and should not result in a reduction of assessable acreage for reclamation districts.